

Remarks

35 U.S.C §102(a)

The Examiner has rejected claims 10, 14, and 17 as anticipated under 35 U.S.C. 102(a) by cited reference documents:

Fax dated 8/13/2003 from Karl Phipps at the society of Tribologists and Lubrication Engineers, together slides from annual meeting held 17-21, 1998 (herein AA).

It is the Examiner's position that these documents teach the claimed invention. Specifically that the slides teach 2-methylisothiazolin-3-one, (MI) combined with IBPC (3-iodo-2-propynyl-N-butylcarbamate) in an effective amount to control bacterial and fungi.

Applicant respectfully disagrees.

AA is a document from a meeting where MI products for metalworking were presented. One of these products consisted of a mixture of MI and IPBC. Pg 14, AA. However, this document does not teach the method of preparing the product or more importantly the purity of the MI component. The purity of the MI is central to being in possession of the invention, any disclosure that does not cover this element can not anticipate the present invention. MI is generated by a cyclisation reaction in the presence of chlorine. In this reaction both MI and 5-chloro-2-methyl-4-isothiazolin-3-one (CIT) are formed , wherin MI is a by-product in the production of CIT. Health Effects of Selected Chemical, E. Soderlund, Volume 2, Kathon, Oct 1992; See also U.S. patent No. 5,466,818 , Col 1, ln 12-16. It should be assumed that the MI used in the AA disclosure had a level of CIT impurity. Removal of CIT is costly, if the product disclosed in AA required a pure level of CIT it would have disclosed such a level. Support for that proposition can be found in document D5 titled *Material Safety Data Sheet for Kordek® 50C Industrial Microbicide*. That reference

discloses that Kordek contains not only 50% weight of MI, but also 3% weight of related reaction products. CIT is such a reaction product.

Lastly, the presence of CIT in the mixture with IPBC according to AA can also be taken from the necessity of stabilizing a MI product for most uses. Those skilled in the art know that in an environment with high pH values, such as metalworking fluids, CIT is unstable and must be stabilized (See AA, pg. 6-7). Contrary to this, the MI of CIT, according to the present invention, is stable and usually does not need to be stabilized.

It is clear that reference document AA does not anticipate the present invention for the reasons set out above. Therefore, the rejection based on 102(a) is overcome

35 U.S.C. §102(b)

It is the Examiner's position that claims 10,11,14, and 17 are anticipated by reference document Rohm and Haas, *Kordek® 50C Biocide for Use in Metalworking Fluid Concentrates*, 1995 (herein BB). Specifically, it is the Examiner's position that Rohm and Haas teach Kordek 50 C (2-Methyl-4-isothiazolin-3 on), an active biocide against a wide range of microorganisms (pg 5) is compatible with additionally fungicides such as Iodopropylbutyl carbonates (IPBC) in a concentration to yield 50 to 100 ppm (page 9).

Applicant respectfully disagrees.

The product described in reference BB originates for the same company that produces reference AA. It is therefore safe to assume that the MI referenced in BB is of the same composition referenced in AA. Therefore the arguments put forward in AA are applicable here. Namely that the disclosure does not teach the characteristics of MI that the present invention discloses, most critically, the level of purity and the stability of MI. Applicant believes that

reference BB has been overcome and it no longer forms the basis of a valid rejection.

It is the Examiner position that claims 10-18 are invalid under 35 U.S.C 102(b) in light of reference document *IPBC Preservative Combination Systems for Material Protection* 1997 (herein DD). Specifically, the Examiner states that reference DD teaches a combination of IPBC and Methyl (chloro)isothiazoline for use as a preservative in cosmetics, paint, wood, and MWF (see table 1-5 and table 1-6) for fungicidal and bactericidal protection of cosmetic products, in concentrations of from 8:1 to 1:200. It is the Examiner's further contention that this disclosure teaches the present invention.

Applicant respectfully disagrees.

It is Applicant's position that the DD reference is inapplicable to the present invention. DD discloses, *inter alia*, a combination of IPBC and "methyl (chloro) isothiazolinone." The later component is a chlorine containing compound. Alternatively, the present invention consists essentially of MI and IPBC only. Those skilled in the art would know that such a stated composition would not contain chlorine. As such, the DD reference can not anticipate the present invention. Applicant believes that reference DD has been overcome and is no longer a valid basis of rejection.

35 U.S.C. 103(a)

It is the Examiner's position that the present invention is rendered obvious in light of prior art reference AA. Specifically, the Examiner contends that reference AA teaches the use of an effective amount of Mi combine with IBPC to control bacteria and fungi. It is the Examiner's position that while the prior art does not teach all the percentage compositions, or concentration ratios of the present invention, it none the less renders the present invention obvious.

Applicant respectfully disagrees.

Applicant points out that while prior art document AA does disclose MI and IPBC, there is no disclosure of the methods of preparing or the purity of the MI component. Additionally, the present invention discloses a MI of CIT that is stable and does not need to be combined with other compounds to become stable. The prior art does not disclose any of these unique facets of the present invention.

While it is true that it is not inventive to discover the optimum or workable ranges by routine experimentation, it is inventive when a compound does not possess expected properties.

Ex parte Mead Johnson & Co. 227 USPQ 78 (Bd. Pat. App. & Inter. 1985). As stated previously, MI is generally found with CIT because of the nature of the chemical reaction. Additionally in metalworking environments CIT is necessary to stabilize MI. Finally, the cost of separating CIT for MI is prohibitive. The present invention uses a much purer form of MI that is stable without the presence of CIT. This is an unexpected property for those skilled in the art. The present invention can not be considered obvious when several essential compounds of the prior art, namely CIT, are missing from the present invention. Those skilled in the art would assume a certain level of CIT to be present in the current invention, since that is what the prior art discloses. As such the present invention is nonobvious because it performs the functions disclosed in the prior art, but without “expected” compounds. This is more than merely discovering optimum ranges. Optimum ranges does not cover the removal of a compound, as is the case with CIT, nor is it the stability of a compound that is usually unstable, as in MI.

Applicant believes that the Examiner’s rejections have been overcome, and that reference document AA is no longer a valid basis for rejection under 35 U.S.C. 103(a).

It is the Examiner’s position that the present invention is rendered obvious in light of reference document BB. It is the Applicant’s position that reference document BB and reference document AA are so similar in their disclosure as to be cumulative. As such, Applicant extends the

788-027

reasoning behind a finding of nonobviousness that was illustrated above, to the present objection.

Conclusion

For the foregoing reasons, Applicant respectfully requests that the rejections based on 35 U.S.C. 102 and 103 be removed. An early and favorable action is earnestly solicited.

Respectfully Submitted,



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